

WHAT IS CLAIMED IS:

- 1                   1.       A method of providing data, said method comprising:  
2                   storing a first set of encryption data associated with a first data stream;  
3                   encrypting a first data stream having said first-level-of-encryption;  
4                   storing a second set of encryption data associated with a second data  
5 stream;  
6                   encrypting the second data stream having a second-level-of-encryption,  
7 said first-level-of-encryption being different from said second-level-of-encryption; and  
8                   utilizing a common memory to encrypt said first data stream at said first-  
9 level-of-encryption and to encrypt said second data stream at said second-level-of-  
10 encryption.
- 1                   2.       The method as described in claim 1 wherein said first set of  
2 encryption data comprises at least one encryption key.
- 1                   3.       The method as described in claim 1 and further comprising  
2 transmitting said first and second data streams to a set-top box.
- 1                   4.       The method as described in claim 3 and further comprising storing  
2 a plurality of decryption algorithms at said set-top box.
- 1                   5.       The method as described in claim 1 and further comprising:  
2 transmitting a first number of services in said first data stream; and  
3 transmitting a second number of services in said second data stream, said  
4 second number of services being different from said first number of services.
- 1                   6.       The method as described in claim 1 wherein said first-level of  
2 encryption utilizes the Data Encryption Standard and wherein said second-level-of-  
3 encryption utilizes an encryption algorithm different from said Data Encryption Standard.
- 1                   7.       The method as described in claim 1 and further comprising:  
2 decrypting said first data stream at said set-top box; and  
3 decrypting said second data stream at said set-top box.
- 1                   8.       The method as described in claim 1 and further comprising storing  
2 a portion of said first set of encryption data in RAM.

1                   9.     The method as described in claim 1 and further comprising storing  
2 a portion of said first set of encryption data in a register of a microprocessor.

1                   10.    A cryptography circuit comprising:  
2                   a memory operable to store a first set of encryption data for a data stream;  
3                   a reconfiguration circuit operable to reconfigure said memory such that  
4 said memory stores a second set of encryption data different from said first set of  
5 encryption data.

1                   11.    The cryptography circuit as described in claim 10 wherein said  
2 reconfiguration circuit is triggered by a change in the encryption of said data stream.

1                   12.    The cryptography circuit as described in claim 10 and further  
2 comprising a memory to store a plurality of encryption algorithms.

1                   13.    The cryptography circuit as described in claim 10 wherein said  
2 reconfiguration circuit comprises:  
3                   code means for storing a second set of encryption data; and  
4                   code means for implementing an encryption algorithm.

1                   14.    A method of allocating resources comprising:  
2                   allocating a memory with a first set of decryption data corresponding to a  
3 first-level-of-encryption;  
4                   receiving a first data stream having said first-level-of-encryption;  
5                   re-allocating said memory with a second set of decryption data  
6 corresponding to a second-level-of-encryption said second-level-of-encryption being  
7 different from said first-level-of-encryption of said first data stream; and  
8                   receiving a second data stream having said second-level-of-encryption.

1                   15.    The method as described in claim 14 and further comprising  
2 detecting that said second-level-of-encryption of said second data stream is different from  
3 said first-level-of-encryption of said first data stream.

1                   16.    The method as described in claim 14 wherein said allocating a  
2 memory with a first set of decryption data corresponding to said first-level-of-encryption  
3 comprises storing decryption key data.

1                    17.     The method as described in claim 16 wherein said re-allocating  
2     said memory with a second set of decryption data corresponding to said second-level-of-  
3     encryption comprises storing decryption key data.

1                    18.     The method as described in claim 14 wherein said first data stream  
2     is comprised of a plurality of different services, each service encrypted at the same level  
3     of encryption.

1                    19.     An integrated circuit comprising:  
2                    an input to receive data;  
3                    a memory to store a first set of cryptographic data;  
4                    a processor operable to re-allocate said memory so as to store a second set  
5     of cryptographic data;  
6                    wherein said processor is operable to implement a plurality of  
7     cryptographic algorithms.

1                    20.     The integrated circuit as described in claim 19 wherein said  
2     cryptographic algorithms are encryption algorithms.

1                    21.     The integrated circuit as described in claim 19 wherein said  
2     cryptographic algorithms are decryption algorithms.

1                    22.     A set-top box apparatus comprising:  
2                    an input to receive a data stream;  
3                    a processor coupled to said input;  
4                    a memory coupled to said processor configured to store a first set of  
5     decryption data;  
6                    code for use by said processor that allows said processor to reconfigure  
7     said memory with a second set of decryption data.

1                    23.     A method of providing encrypted data, said method comprising:  
2                    providing a first set of services;  
3                    encrypting at least one of said services from said first set of services at a  
4     first-level-of-encryption;  
5                    combining the first set of services into a first data stream;

- 6 transmitting from a headend to a set-top box said first data stream;
- 7 storing a first set of decryption keys associated with said first-level-of-
- 8 encryption in an integrated circuit in said set-top box, said first set of keys corresponding
- 9 to the decryption algorithm for the first-level-of-encryption;
- 10 decrypting said first data stream;
- 11 providing a second set of services;
- 12 encrypting at least one of said services from said second set of services
- 13 with an encryption algorithm different from said first-level-of-encryption;
- 14 combining the second set of services into a second data stream;
- 15 formatting said second data stream;
- 16 transmitting from said headend to said set-top box said second data stream;
- 17 storing a second set of decryption keys associated with said second-level-
- 18 of-encryption in said integrated circuit in said set-top box;
- 19 storing a plurality of decryption algorithms in said set-top box; and
- 20 decrypting said second data stream.